Unlearning Racism in Geoscience
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## COLORADOSCHOOLOFMINES <br> EARTH•ENERGY•ENVIRONMENT

URGE Demographic Data for Colorado School of Mines

This is what was found by Mines Geoscience at the Colorado School of Mines on demographic data (public and internal facing) as well as stated goals for representation, and/or proposals to collect and report demographic data.

- The link(s) to demographic data at our organization are here:
- https://ir.mines.edu/data-visualizations/faculty/ - Faculty Demographics
- https://ir.mines.edu/wpcontent/uploads/sites/66/2020/09/Fall2020SummaryCensusEnrollmentReport.pdf Student Demographics
- Analysis of past invited speaker demographics
- This analysis has not been completed and our pod has decided that collecting the data and analyzing the data will be one of the goals for our departments moving forward.
- If data are not collected, what is the reason?
- The data for invited speaker demographics has not been collected because there has not been a survey asking for speakers to self-identify.

| Faculty Headcount |  |  |  |  |  |  |  | Filter Select: <br> Home Organization |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Year |  |  |  |  |  | (All) | $\checkmark$ |
|  |  | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |  |  |
| Humanities Arts \& Social .. | Teaching Associate Professor |  |  |  |  |  | 1 | Gender |  |
| Liberal Arts and Intl | Assistant Professor | 1 | 1 | 1 |  |  |  | (All) | - |
| Studies | Teaching Associate Professor |  |  |  | 1 | 1 |  |  |  |
| Mechanical Engineering | Associate Professor |  |  |  |  | 1 | 1 | Tenure |  |
|  | Assistant Professor | 1 | 1 | 1 | 1 |  |  | (All) | $\checkmark$ |
| Mining Engineering | Assistant Professor |  |  | 1 | 1 | 1 | 1 |  |  |
| Grand Total |  | 2 | 2 | 3 | 3 | 3 | 3 | Primary Ethnicity | $\Gamma$ |
|  |  |  |  |  |  |  |  | Black or African Am | - |

- How does your organization compare to others, or to the field as a whole?
- AGI - "Diversity in the Geosciences - a Look at the Data and the Actions of the Community"-https://www.americangeosciences.org/webinars/diversity-geosciences-look-data-and-actions-community
- In 2017-2018 (The most recent data available) Our Geology and Geological Engineering Department and our Geophysics departments employ 4 faculty at the assistant - full professor level who have selfidentified as non-caucasian. The two departments employed 30 faculty members in that year.
- Overall, our faculty representation is below



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- The student population at Colorado School of Mines (all programs), however, is slightly more diverse (see figure below)

- Enrollment by Race \& Ethnicity
- 2017 Data from the Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment. www.datausa.io
- Creating and Promoting Gender Equity and Diversity in Professional Geological Societies - https://eartharxiv.org/repository/view/2060/
- Gender-wise, female faculty account for $30 \%$ of the faculty population in our two departments, which is similar to the findings of women in leadership roles at Professional Geological Societies
- At the student level, females also account for $30 \%$ of the student population
- Public goals on demographics or increasing representation: Patrick and Manika
- Are there general goals stated at your organization for achieving representation?
- Goals for faculty hiring
- Faculty by-laws need to be edited to be more inclusive



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- Full report on Mines DI\&A strategic plan at https://www.mines.edu/diversity/strategicplan/

FIGURE 2.
DI\&A Council process and timeline


- Mines DI\&A goals:
- Attract, retain and graduate a thriving and diverse student body
- Attract, retain, develop and promote a thriving and diverse employee community
- Cultivate an inclusive campus culture that promotes and celebrates inclusion and achievement
- Inspire shared responsibility, participation and accountability for DI\&A efforts across the Mines community
■ Mines@150 - "In 2024, Mines will be..."
- Accessible and attractive to qualified students from all backgrounds
- A great community in which to learn, explore, live and work
- A leader in educating STEM students and professionals
- A preferred partner for talent, solutions and lifelong learning 5
- A producer of differentiated and highly desired STEM-educated leaders



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- A go-to place for use-inspired research and innovation needed for industry and societal changes
- The exemplar for alumni affinity, visibility and involvement
- The active faculty searches are striving to achieve a diverse applicant pool.
- Are there measurable goals stated at your organization for achieving representation?
- Problem: very few measurable goals in these campus-wide diversity statements. Specifically, there is a lack of accountability and transparency in hiring practices, admissions, and
- These aren't geology specific, but there are retention/recruitment benchmarks that Mines is attempting to achieve by 2024 and could be applied to geology depts.

RECRUITMENT
Recommendations:

1. Create a strategy for $\mathrm{K}-14$ pipeline coordination and excellence.
2. Ensure that Mines is financially accessible and attractive to students with diverse backgrounds
3. Implement a coordinated campus strategy to recruit graduate students with diverse backgrounds
4. Broaden the diversity of faculty and staff by continuing and institutionalizing hiring best practices.

- HIRING EXCELLENCE

The Mines Hiring Excellence program, initiated at the start of the DI\&A Council in 2017, has achieved 40 percent women faculty hires and has extended an introduction to implicit bias training to numerous faculty across campus.


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## RETENTION



Recommendations:

1. Identify critical transition points and provide support through thoughtful mentorship and professional development programs
2. Evaluate the current advising structure for students and consider new models to support retention.
3. Develop programming for professional development and mentorship to
4. Foster initiatives to identify and develop a diverse leadership team.
5. Establish and maintain Mines employee resource groups (ERGs) sponsored by Mines' leadership.

- RETENTION AND GRADUATION Hispanic and low-income (Pell) students have lower first-to-second-year retention (top) and four-year graduation rates (bottom).

- Suggested additional measurable goals for improving diversity demographics department specific
- Goal 1: Be more thoughtful in extending speaker invitations and to collect data to assess the diversity of speakers
- Goal 2: Land Acknowledgement Statement
- Goal 3: Create diversity benchmarks for candidate pools, whether faculty hires, graduate students, or undergraduate admissions.
- Accountability - mandatory reporting of rejections/applications over a yearly/5-year period could lead to more self-reflection and systemic change.
- Could be in the form of a by-department report for incoming graduate students and faculty.
- Goal 4: Creating curriculum (altering existing class or creating additional class) on the realistic history of geoscience in the U.S. including racist mapping practices and showcasing diversity.



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- Policy or proposed policy for collecting demographic data at your organization:
- How data are collected, reported, tracked, and utilized in decision making.
- We have requested information on this topic from administration but no response was provided
- OR proposed policy for collecting, reporting, tracking and utilizing demographic data
- We propose that when faculty candidate pools are created during a search, the HR committee will provide an analysis of the demographic of the candidate pool. Then, during each reduction in the pool size, the demographic profile of the candidate pool must be representative of the pool as a whole, or the search committee needs to defend the change to the demographic profile.
- What did you learn about other organizations (or in general) while investigating demographic data?
- https://diversity.Ideo.columbia.edu/seminardiversity - Increase diversity in seminars
- https://www.nature.com/articles/d41586-019-03784-x - No all-male panels
- http://www.ohrc.on.ca/en/policy-and-guidelines-racism-and-racial-discrimination/part-3-\�\�\�-guidelines-implementation-monitoring-and-combating-racism-and-racial-discrimination - more information on collection of demographic data in Canada.

■ We learned that during faculty searches, HR collects demographic data, however, they will not provide it to the faculty on the search committee

- We also learned that Mines places their demographic data in tables instead of easy to read graphics
- In addition, the cost to attend Mines may be a barrier to diversifying the student population at Mines (see charts below)

Other interesting charts below illustrating potential barriers to entry.

## Financial Aid by Income Level

| $72 \%$ | $40 \%$ |
| :--- | :--- |
| OF UNDERGRADUATES RECEIVE <br> GRANTS | OF UNDERGRADUATES RECEIVE <br> FEDERAL LOANS |

$72 \%$ of undergraduate students at Colorado School of Mines received grants or loans in 2017. This represents a growth of $12.5 \%$ with respect to 2016 , when $64 \%$ of undergraduate students received financial aid.

This chart compares the average award discount at Colorado School of Mines (in red) with that of other similar universities.

The average award discount is the ratio between the average grant or scholarship value, and the cost, which is the sum of out-of-state tuition, room, board, book, supplies, and other expenses.


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Average Net Price

| \$25,472 | 1.49\% |
| :---: | :---: |
|  |  |

In 2017 Colorado School of Mines had an average net price - the price paid after factoring in grants and loans - of \$25,472. Between 2016 and 2017, the average net price of Colorado School of Mines grew by $1.49 \%$.
This chart compares the average net price of Colorado School of Mines (in red) with that of other similar universities.

Average net price is calculated from full-time beginning undergraduate students who were awarded a grant or scholarship from federal, state or local governments, or the institution.
Data from the Integrated Postsecondary Education Data System (IPEDS) Student Financial Aid and Net Price.

## 目 View Data $\triangle$ Save Image



